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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,654	01/13/2006	Zhong Zhun	PHUS030235	1567
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EXAMINER				
ZEWDU, MELESS NMN				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/564,654

Applicant(s)

ZHUN, ZHONG

Examiner

Meless N. Zawdu

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date 1/13/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

1. This action is the first on the merit of the instant application.
2. Claims 1-24 are pending in this action.

Priority

The claim for foreign priority is based on US provisional applications (see 60487423, filed on 7/15/03) and (60541870, filed on 2/4/04) which is improper. Furthermore, if applicant desires to claim foreign priority, a certified copy of the foreign priority document is required.

Specification

The disclosure is objected to because of the following informalities: subtitles like, "Brief description of the drawings" , "Detail description of the drawings" "summary of the invention", "Field of the invention" and "background of the invention" are lacked. Appropriate correction is required.

Claim Objections

Claims 1-24 are objected to because of the following informalities: the numbers used to designate components should be placed in brackets. For example: in claim 1, line 3, sending a probe message 210, 305, by an (STA) 230 should be written as --- sending a probe message (210, 305), by an (STA 230). Appropriate correction is required.

Claim 3 is objected to because of the following informalities: on line 1, "1m" should be --- 1 ---. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-12 and 15-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scherzer et al. (Scherzer) (US 7,031,336 B2) in view of Jeong et al. (Jeong) (US 2006/0111103 A1). For examination purpose only, claim 15 is considered first.

As per claim 15: Jeong discloses about an access Point in a wireless local network (WLAN) that provides priority to facilitate a handoff of a station (STA) between one or

more Access Points (AP) (see figs. 1A, 2 and 4; abstract), (wherein the feature --- that provides priority to facilitates a handoff ---- is considered as an intended use for it does not enhance the body of the claim), comprising:

a probe request sensing unit for sensing when a probe request message has been sent on a particular communication channel (see abstract; paragraphs 0022-0023, 0030-0032), (wherein the channel in which the probe is sent is interpreted as a particular channel);

an inter-frame communication sensing unit for sensing a point coordination inter-frame coordination (PIFS) on the particular communication channel (see col. 1, line 66- col. 2, line 14; claim 41); and

probe response sending means for sending the probe response message sensed by the inter-frame communication sensing unit (see col. 9, lines 46-60). But, Scherzer does not explicitly teach about – inter-frame space (PIFS) and sending the probe message after the (PIFS) sensed by the inter-frame communication sensing unit, as claimed by applicant. However, in the same field of endeavor, Jeong teaches about fast active scanning wireless network apparatus and method, wherein a probe response is sent after either a SIFS or PIFS period (time frame) (see paragraphs 0126, 0130, 0134). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching of Scherzer with that of Jeong for the advantage of gaining access priority for a device operating under a point coordination function (see paragraph 0012).

As per claim 16: Scherzer teaches about an access Point according, wherein the inter-frame communication sensing unit 415 and the probe response means 420 sense a distributed coordination function (DCF) inter-frame space period (DIFS) of a particular channel and respond to probe requests with non-unicast destination addresses after the (DIFS) and back-off interval (see col. 1, line 66-col. 2, line 14).

As per claim 17: the features of claim 17 are similar to the features of claim 15, wherein examiner interprets the feature --- a particular second station --- as being on of the stations (STA 55 or 40) in fig. 2 of the prior art. Hence, claim 17 is rejected on the same ground as claim 15.

As per claim 18: Scherzer teaches a system, wherein the probe response message is sent by said particular second station without performing a back-off interval (see col. 1, line 66-col. 2, line 14). Contention free CF does not require back-off.

As per claim 19: Scherzer teaches a system, wherein the probe request message sent by the first station comprises a uni-cast message to the particular second station (see col. 1, line 66-col. 2, line 14; col. 9, lines 46-60).

As per claim 20: Scherzer teaches a system, wherein the 1st station is adapted so that if a probe response message from the particular second station is not received within a predetermined time period, the first station senses a distributed coordination function inter-frame space period, wherein the first station selects and implements a back-off interval prior to broadcasting the probe request message on the particular channel to all available second stations (see col. 1, lines 32-65).

As per claim 21: Jeong teaches about system, wherein if the first station does not receive a probe response message from the particular second station within a predetermined time period, the first station senses a distributed coordination function inter-frame space period, wherein the first station [238] selects and implements a back-off interval prior to broadcasting the probe request message on a different channel than the particular channel (see paragraphs 0013, 0031- 0035, 0114).

As per claim 22: Jeong teaches about a system, wherein if the first station does not receive a probe response message from the particular second station within a predetermined time period, the first station selects another second station on the particular channel and senses a distributed coordination function inter-frame space period, wherein the first station selects and implements a back-off interval prior to sending another probe request message that comprises a uni-cast message (see paragraphs 0027, 0043, 0080, 0028).

As per claim 23: the features of claim 23 are similar to the features of claim 15. Therefore, claim 23 is rejected on the same ground and motivation as claim 15.

As per claim 24: Scherzer teaches about a first station, wherein the inter-frame communication sensing unit and the probe response means sense a distributed coordination function inter-frame space period of a particular channel and respond to probe requests with non-unicast destination addresses after the distributed coordination function inter-frame space period and back-off interval (see col. 1, lines 32-53).

As per claim 1: the features of claim 1 are similar to the features of claim 15, except claim 1 is directed to a method comprising steps intended/required to be performed by

the apparatus of claim 15. Hence, since, the apparatus of claim is closed and the method is required by the apparatus, claim 1 is rejected on the same ground and motivation as claim 15.

As per claim 2: Jeong teaches about a method, wherein the probe response message is sent in step (d) by said particular (AP) without performing a back-off interval (see paragraph 0012). If access is priority based, as taught by Jeong, it is, thus, without performing backoff.

As per claim 3: Jeong teaches about a method, wherein the probe request message is a uni-cast message (probe message) to the particular (AP) (see paragraphs 0028, 0103).

As per claim 4: Jeong teaches about a method, wherein if the STA does not receive a probe response message within a predetermined time period, the STA senses a distributed coordination function inter-frame space period (DIFS) inter-frame space, wherein the STA (i) selects and implements a backoff interval prior to broadcasting the probe request message on the particular channel to all available (APs) (see paragraphs 0105).

As per claim 5: Jeong teaches about a method, wherein if the STA does not receive a probe response message within a predetermined time period, the STA senses a distributed coordination function inter-frame space period (DIFS) inter-frame space, wherein the STA (i) selects and implements a back-off interval prior to broadcasting the probe request message on a different channel than the particular channel (see paragraphs 0026-0027, 0105)..

As per claim 6: Jeong teaches about a method, wherein if the STA does not receive a probe response message within a predetermined time period, the STA selects another (AP) on the particular channel and senses a distributed coordination function inter-frame space period (DIFS) inter-frame space, wherein the STA (i) selects and implements a back-off interval prior to sending another probe request message that comprises a uni-cast message (see paragraphs 0026-0028, 0103, 0105).

As per claim 7: the feature of claim 7 is similar to the feature of claim 6. Hence, claim 7 is rejected on the same ground and motivation as claim 6.

As per claim 8: Scherzer teaches about a method, wherein said backoff interval having a range of (0, CW), where CW denotes a Contention Window (time) (see col. 10, lines 30-33).

As per claim 9: Jeong teaches a method, wherein only the particular (AP) transmits after the (PIFS) inter-frame in response to receiving the uni-cast probe request message, from an STA (see paragraphs 0012, 0103, 0105; see also abstract and paragraphs 0010-0026).

As per claim 10: Jeong teaches about a method, further comprising:(e) acknowledging receipt of a probe response message by the (STA) in response to the probe request message (paragraphs 0021, 024, 0031-0032, 0107, 0109, 0134); and
(f) continuing a hand-off function by the STA with the particular (A.P) (see paragraph 0005).

As per claim 11: the features of claim 11 are similar to the features of claim 15, except

preparing a probe response message by the one particular (AP) , which examiner considers as obvious from the reception of the probe response message shown in the prior art point coordinate function system. Therefore, claim 11 is rejected on the same ground and motivation as claim 15.

As per claim 12: the feature of claim 12 is similar to the feature of claim 5. Hence, claim 12 is rejected on the same ground and motivation as claim 5.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scherzer in view of Jeong and further in view of Ala-Laurila et al. (Laurila) (US 6,587,680 B1)..

As per claim 13: while the preamble is considered as an intended use for it fails to enhance the body of the claims, user some of the features of claim 13 are similar to the features of claim 15, and hence rejected on the same ground and motivation therewith. Furthermore, the feature --- preparing a probe response message by the (AP) --- is , obvious from the reception of the probe response message shown in the prior art point coordinate function system. In other words, a message received must have been prepared. Still further the different feature, the --- new AP – in association with probe request and probe response is taught by Jeong's reference which includes CAP (list of candidate list of access points (CAP) (see fig. 15; paragraphs 0079, 0096). In other words, whenever, a STA scans the CAP list and become associated with a given access point (AP), that access point is a new one. But, the references in question (Scherzer in view of Jeong) do not explicitly teach about a (STA) authenticating and re-associating with said new (AP), followed by the (STA) being handed-off to said new

(AP), as claimed. However, in the same field of endeavor, Laurila teaches about transfer of secure association during a mobile terminal handover, wherein a mobile terminal authenticates a new AP during handover (i.e., re-association) (see col. 8, lines 30-35). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching of Scherzer in view of Jeong with that of Laurila for the advantage of providing an efficient method/apparatus for re-establishing an existing security association when a handover event occurs in a radio communications system such as an IEEE 802.11 or HIPERLAN (see col. 5, lines 19025).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Meless N. Zewdu whose telephone number is (571) 272-7873. The examiner can normally be reached on 8:30 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bost Dwayne D can be reached on (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

/Meless N Zewdu/
Primary Examiner, Art Unit 2617
6/2/2009